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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/025,951

12/19/2001

Xiaoxiao Zhang

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31781

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07/18/2006

CIBA VISION CORPORATION
PATENT DEPARTMENT
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EXAMINER

LAVARIAS, ARNEL C

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 07/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/025,951

Applicant(s)

ZHANG ET AL.

Examiner

Arnel C. Lavarias

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/26/06, 5/24/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendments to the specification of the disclosure in the submission dated 6/26/06 are acknowledged and accepted. In view of these amendments, the objections to the specification in Sections 8-9 of the Office Action dated 2/28/06 are respectfully withdrawn.
2. The Examiner notes that no substitute oath or declaration was submitted in response to the objections to the substitute oath or declaration in Section 2 of the Office Action dated 2/28/06.
3. The Examiner notes that the status identifiers for Claims 8-47 were listed improperly as 'withdrawn', and should have instead been listed as 'cancelled'. The Examiner additionally notes that, under 37 CFR 1.121(c)(4), claim text for cancelled claims are not required, even though the claim numbers and their associated status identifiers are required. Thus, Claims 8-47 should be listed as '8-47. (cancelled)'.

Response to Arguments

4. The Applicants' arguments filed 6/26/06 have been fully considered but they are not persuasive.
5. The Applicants argue that, with respect to Claim 1, as well as Claims 2-7 which depend on Claim 1, it is improper to combine the teachings of Isreal and Zhang et al. without a teaching or suggestion, and that Isreal and Zhang et al. teach away from each

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other. Further, Applicants argue that the combined teachings of Isreal and Zhang et al. destroy the intended function of Isreal. The Examiner respectfully disagrees. The Examiner notes that motivation to combine the teachings of Isreal and Zhang et al. was provided in Section 11 of the Office Action dated 2/28/06 (See specifically Page 6, which states:

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the holographic optical element of Israel, have a finite ray acceptance angle that diffracts up to 100% of incoming light when the Bragg condition is met, and the lens allowing the wearer to switch between optical powers, as taught by Zhang et al., *1) to provide an active and highly selective means of modifying of the incident light (via diffraction), and 2) to allow for correction of ametropic conditions that are not easily accommodated by conventional corrective optical lenses, without exhibiting any optical interferences from the other optical powers of the lens.* (Emphasis added)

In addition, such motivation is specifically stated in Zhang et al. (See specifically col. 17, lines 14-26 of Zhang et al.). With respect to arguments regarding Isreal and Zhang et al. teaching away from each other, the Examiner notes that both Isreal and Zhang et al. discloses holographic-based intraocular multifocal lenses used to focus at least some portion of incident light on the eye to the retina, and specifically to the fovea or a non-diseased portion of the retina (which may or may not necessarily be at the location of the fovea). In addition, it is noted that features upon which applicant relies (i.e., use of only one optical power at a time to form a clearly perceivable image along a wearer's line of sight; the fovea of an eye) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read

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into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Finally, with respect to arguments that the combination of Isreal and Zhang et al. would destroy the intended function of Isreal, it is noted that Zhang et al. was relied upon to evidence the holographic optical element having a finite ray acceptance angle that diffracts up to 100% of incoming light when the Bragg condition is met, and the lens allowing the wearer to switch between optical powers. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

6. Claims 1-7 are again rejected as follows.

Oath/Declaration

7. The substitute oath or declaration filed 7/29/05 is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

Non-initialed and/or non-dated alterations have been made to the oath or declaration. See 37 CFR 1.52(c). See un-initialed alterations made by inventor Ruolin Li on the signature page.

Claim Rejections - 35 USC § 103

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8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Israel (U.S. Patent No. 6139145), of record, in view of Zhang et al. (U.S. Patent No. 5997140), of record.

Regarding Claims 1-5, Israel discloses an optical lens (See for example 60 in Figures 3-5) comprising at least one holographic optical element (See 66 in Figures 3-5) and at least one focusing element (See 64 in Figures 3-5), the holographic optical element characterized by an interference fringe pattern (it is noted that holograms are inherently comprised of interference fringe patterns), the holographic optical element further characterized as possessing substantially neutral focusing power (See col. 8, lines 19-46; it is noted that the holographic optical element provides prismatic power), wherein the optical lens is a multifocal lens (See for example Figures 5, 9; col. 3, line 9-col. 6, line 36; col. 8, lines 19-56). Israel additionally discloses the optical lens being biocompatible (See col. 8, lines 1-18), the optical lens being a contact lens (See col. 8, lines 1-18), and the optical lens being a spectacle lens (See col. 8, lines 1-18), the optical lens being an intraocular lens (See col. 8, lines 1-18), and the holographic optical lens element being a transmission holographic optical lens element (See for example col. 3, lines 8-18; col. 9, lines 26-36). Israel lacks the holographic optical element having a finite ray acceptance

angle that diffracts up to 100% of incoming light when the Bragg condition is met, or the lens allowing the wearer to switch between optical powers. However, it is well known in the art of holography that only light of a particular range of wavelengths and of a particular range of angle of incidence will be diffracted by the interference fringes on a hologram, and that light outside of these wavelength and angle ranges will transmit through the hologram unmodified. For example, Zhang et al. teaches the use of a holographic optical element as part of an optical/ophthalmic lens (See for example Figures 1-2), such as a multifocal lens (See various figures; col. 2, line 66-col. 3, line 20; col. 17, lines 14-26), wherein the holographic optical element has a finite ray acceptance angle that diffracts up to 100% of incoming light when the Bragg condition is met (See col. 3, line 21-col. 4, line 23). In addition, Zhang et al. teaches the ophthalmic lens being a multifocal lens that may be actively switched between two or more optical powers (See Figures 1-2; col. 2, line 66-col. 4, line 13; col. 17, lines 14-26). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the holographic optical element of Israel, have a finite ray acceptance angle that diffracts up to 100% of incoming light when the Bragg condition is met, and the lens allowing the wearer to switch between optical powers, as taught by Zhang et al., 1) to provide an active and highly selective means of modifying of the incident light (via diffraction), and 2) to allow for correction of ametropic conditions that are not easily accommodated by conventional corrective optical lenses, without exhibiting any optical interferences from the other optical powers of the lens.

Regarding Claim 6, Israel in view of Zhang et al. discloses the invention as set forth above in Claim 1, except for the holographic optical lens element being a transmission volume holographic optical lens element. However, Zhang et al. additionally teaches that the holographic optical element used as part of an optical lens may be a transmission volume holographic optical lens element (See col. 2, lines 20-36; col. 3, lines 12-20). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the holographic optical element of Israel in view of Zhang et al. to be a transmission volume holographic optical element, for the purpose of reducing the size (i.e. thickness) of the holographic optical element, while retaining a high degree of diffraction efficiency.

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Israel in view of Zhang et al. as applied to Claim 1 above, and further in view of Chang (U.S. Patent No. 4830441), of record.

Israel in view of Zhang et al. discloses the invention as set forth above in Claim 1, except for the holographic optical lens element being a reflective holographic optical lens element. However, it is well known in the art of holography that holographic optical lens elements may be fabricated to operate either in transmission mode or in reflective mode, depending on the holographic writing configuration used (i.e. whether the object and reference beams were incident on the same side or on opposite sides of the holographic recording medium). For example, Chang teaches optical elements for laser eye protection (See for example Abstract; Figure 3), wherein holographic optical elements (See for example 331, 332, 341, 342 in Figure 3) are utilized as part of an optical lens

system (See 330, 340 in Figure 3) to provide protection for the eyes from stray laser light. In particular, the holographic optical elements are fabricated (See Figures 1-2) such that the reference and object beams are incident on opposite sides of the holographic recording medium (See 163 in Figures 1-2), such that the holographic optical elements acts as a reflecting element when incident light having a predetermined wavelength(s) and proper incident angle(s) strike the surface of the optical element (See for example col. 7, line 41-col 8, line 4). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have holographic optical lens element of the optical lens of Israel in view of Zhang et al. be a reflective holographic optical lens element, as taught by Chang, for the purpose of providing additional light filtering to protect the optical system and observer from spurious light noise and high light intensity levels.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

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advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 571-272-2315. The examiner can normally be reached on M-F 9:30 AM - 6 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Arnel C. Lavarias
Primary Examiner
Group Art Unit 2872
7/12/06